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10/748,487	12/29/2003	Joseph Olakangil	134147	8737

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EXAMINER
NGUYEN, LONG P

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-26* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>*29 December 2003*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____ .

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

Claim 24-25 recites the limitation "the step of determining a final QoS action" in line 1-3. There is insufficient antecedent basis for this limitation in the claim. The examiner will assume claims 24-25 are dependent on claim 23.

Claim 26 recites the limitation "drop...pass" in line 1-3. There is insufficient antecedent basis for this limitation in the claim. The examiner will assume claim 26 is dependent on claim 23.

Claim Rejections - 35 USC § 102

(e) The invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

2.   Claim 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (US 6,567,408, Hereinafter, Li).

As for claim 1, Li shows (a) generating a first string **(src)** and a second string **(dst)** with which to characterize the PDU **(Col. 10 line 25-27)**; (b) determining a first index associated with the first string and a second index associated with the second string **(Col. 10 line 28-40)**, wherein the first index and second index are selected from a plurality of indices **(Col. 10 line 28-40)**; and (c) selecting an action from a plurality of

actions based on tile first index and the second index **(Col. 10 line 28-40)**, each action

being associated with two indices of the plurality of indices **(Col. 10 line 28-40)**.

As for claim 2, Li shows PDU has one field **(i.e. Source address/destination

address, Col. 7 line 35-50)** and the first string and second string each comprise one bit

derived from the one fields of the PDU **(Col. 10 line 25-27)**.

As for claim 3, Li shows the one field is selected from the group consisting of:

source address **(Col. 10 line 25-27)**.

As for claim 4, Li shows wherein the first string comprises one bits selected from

a destination address field of the PDU **(Col. 10 line 25-27)**.

As for claim 5, Li shows the second string comprises one bits selected from a

source address field of the PDU **(Col. 10 line 25-27)**.

As for claim 6, Li shows generating the plurality of actions from policies that

characterize a plurality of traffic flows **(Col. 12 line 55-60)**.

As for claim 7, Li shows using the indices as keys into a memory device **(Col. 9

line 15-18)** comprising the plurality of actions **(Col. 10 line 40-44)**.

As for claim 8, Li shows instructions passing the PDU to a PDU destination

address and instructions to filter the PDU **(Col. 6 line 19-23, and Col. 7 line 49)**.

As for claim 9, Li shows one pointer to one instruction defining the manner in

which to process the PDU **(Col. 12 line 55-68)**.

As for claim 10, Li shows the PDU has one fields **(Col. 7, line 35-50)** and the

step of determining a first index and the second index further comprises the step of

searching a tree **(Col. 9 line 64)**, wherein one fields of the PDU are compared against

the nodes of the tree **(Col. 10 line 27-40)**.

As for claim 11, Li shows the tree is a Patricia trie **(Col. 9 line 64)**.

As for claim 12, Li shows a string generator for generating a first string **(src)** and

a second string **(dst)** with which to characterize the PDU **(Col. 10 line 27)**; and (b) an

index allocate for retrieving a first index associated with the first string **(Col. 10 line 27-**

40) and a second index associated with the second string, wherein the first index and

second index are selected from a plurality of indices **(Col. 7 line 27-40)**.

As for claim 13, Li shows a memory device **(Memory within ESP24)**, operatively

coupled to the index allocate **(Col. 9, line 15-20)**, comprising a plurality of actions, each

action being selected based on two indices of the plurality of indices **(Col. 10 line 27-**

40).

As for claim 14, Li shows the first string **(src)** and second string **(dst)** each

comprise one bit derived from one field of the PDU **(Col. 7 line 35-50)** and **(Col. 10**

line 25-27).

As for claim 15, Li shows the one field is selected from the group consisting of: a

source address **(Col. 7 line 35-50)**.

As for claim 16, Li shows the first string comprises one bit selected from a

destination address field of the PDU **(Col. 10 line 25-27)**.

As for claim 17, Li shows the second string comprises one bit selected from a

source address field of the PDU **(Col. 10 line 25-27)**.

As for claim 18, Li shows the plurality of actions is derived from policies that characterize a plurality of traffic flows **(Col. 12 line 55-60)**.

As for claim 19, Li shows the plurality of indices is keys into the memory device **(Col. 9 line 15-18)**.

As for claim 20, Li shows instructions for passing the PDU to a PDU destination address and instructions to filter the PDU **(Col. 6 line 19-23 and Col. 7 line 49)**.

As for claim 21, Li shows the actions further comprise one or more pointers to one instruction defining the manner in which to process the PDU **(Col. 12 line 55-68)**.

As for claim 22, Li shows the index allocates comprises a trie **(Col. 9 line 64)**, the trie comprising nodes against which one field of the PDU are compared **(Col. 10 line 27-40)**.

3.   Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Yazaki et al. (US 6,768,738, Hereinafter, Yazaki).

As for claim 23, Yazaki shows generating a first string **(Sip)** from source information associated with the PDU **(Col. 15 line 40-44)**; (b) generating a second string **(DIP)** from destination information associated with the PDU **(Col. 15 line 40-44)**; (c) identifying a first QoS action from a plurality of QoS actions based on the first string **(Col. 15 line 40-44)**; (d) identifying a second QoS action from a plurality of QoS actions based the second string **(Col. 16 line 20-25)**; and (e) determining a final QoS action from at least one of the first and second QoS actions **(Col. 16 line 27-28)**.

As for claim 24, Yazaki shows applying a hierarchical rule indicating which one of

the first and second QoS actions has precedence **(Col. 16 line 27-28, figure 14)**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Yazaki in view of Tuck, III et al. (US 7,107,352, Hereinafter, Tuck).

As for claim 25, Yazaki does not show one of the first and second QoS actions is

a PDU pass action recommending that the PDU be forwarded, and one of the QoS

actions is a PDU drop action recommending that the PDU be filtered.   However, Tuck

shows PDU pass action recommending that the PDU be forwarded **(Figure 2, Col. A**

row 1 show a pass), and one of the QoS actions is a PDU drop action recommending

that the PDU be filtered **(figure 2, Col. D row 1 show a drop)**. It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify filtering of

Yazaki with the pass/drop function of Tuck in order to indicate the QoS function of .

different devices in the network.

As for claim 26, Yazaki does not show wherein the hierarchical rule indicates that

the PDU drop action has precedence over the PDU pass action. However, Tuck shows

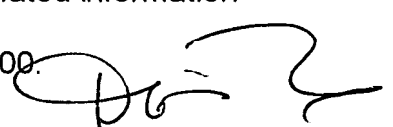the hierarchical rule indicates that the PDU drop action has precedence over the PDU

pass action **(Figure 2, Col. A row 1 show a pass, Col. D row 1 show a drop, and Col. PASS/DROP shows a drops, therefore drop action take precedence over pass function)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the QoS function of Yazaki with Pass/Drop precedence of Tuck in order to relieve congestion of a receiving device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long P. Nguyen whose telephone number is (571)-272-9740. The examiner can normally be reached on Monday - Thursday 7:30 - 5:00 EST Alternate Friday 7:30-4:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Long Nguyen